

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

CALLAWAY GOLF COMPANY

Plaintiff,

 \mathbf{y}_i

ACUSHNET COMPANY,

Defendant.

C.A. No. 06-91 (SLR)

JURY TRIAL DEMANDED

PUBLIC VERSION

**ACUSHNET COMPANY'S OPENING BRIEF IN SUPPORT
OF ITS PROPOSED CLAIM CONSTRUCTIONS**

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TABLE OF CONTENTS

I. NATURE AND STAGE OF THE PROCEEDINGS.....1

II. SUMMARY OF ARGUMENT2

III. STATEMENT OF FACTS.....3

IV. ARGUMENT.....5

A. Legal Standards Applicable to Claim Construction.....5

**1. The Claims Should be Construed in Light of the
Intrinsic Evidence5**

B. Proper Construction of the Disputed Claim Terms.....9

1. Proper Construction of “Shore D hardness”10

2. Proper Construction of “core”20

**3. Proper Construction of “inner cover layer comprising
an ionomeric resin ... having a modulus of from about
15,000 to about 70,000 psi”28**

V. CONCLUSION29

TABLE OF AUTHORITIES

CASES

<i>Alloc, Inc. v. United States International Trade Commission</i> , 342 F.3d 1361 (Fed. Cir. 2003).....	24
<i>Amhil Enterprises Ltd. v. Wawa, Inc.</i> , 81 F.3d 1554 (Fed. Cir. 1996).....	26
<i>Aquatex Industrial v. Techniche Solutions</i> , 419 F.3d 1374 (Fed. Cir. 2005).....	6
<i>Arthur A. Collins, Inc. v. Northern Telecom Ltd.</i> , 216 F.3d 1042 (Fed. Cir. 2000).....	8
<i>Bilstad v. Wakalopulos</i> , 386 F.3d 1116 (Fed. Cir. 2004).....	25
<i>CVI/Beta Ventures v. Tura LP</i> , 112 F.3d 1146 (Fed. Cir. 1997).....	7, 18
<i>Chimie v. PPG Industrial</i> , 402 F.3d 1371 (Fed. Cir. 2005).....	9, 11
<i>Chiron Corp. v. Genentech, Inc.</i> , 363 F.3d 1247 (Fed. Cir. 2004).....	25
<i>Goldenberg v. Cytogen, Inc.</i> , 373 F.3d 1158 (Fed. Cir. 2004).....	8
<i>Graham v. John Deere Co.</i> , 383 U.S. 1 (1966).....	7
<i>Hockerson-Halberstadt, Inc. v. Avia Group International</i> , 222 F.3d 951 (Fed. Cir. 2000).....	7, 18
<i>Innova/Pure Water, Inc. v. Safari Water Filtration System, Inc.</i> , 381 F.3d 1111 (Fed. Cir. 2004).....	5
<i>Interactive Gift Express, Inc. v. Compuserve, Inc.</i> , 256 F.3d 1323 (Fed. Cir. 2001).....	5
<i>Jonsson v. Stanley Works</i> , 903 F.2d 812 (Fed. Cir. 1990).....	8

<i>Kumar v. Ovonic Battery Co., Inc.</i> , 351 F.3d 1364 (Fed. Cir. 2003).....	8
<i>LG Electronics, Inc. v. Bizcom Electronics, Inc.</i> , 453 F.3d 1364 (Fed. Cir. 2006).....	9
<i>LizardTech, Inc. v. Earth Resource Mapping, Inc.</i> , 424 F.3d 1336 (Fed. Cir. 2005).....	25, 26
<i>Markman v. Westview Instruments</i> , 52 F.3d 967 (Fed. Cir. 1995).....	6
<i>Microsoft Corp. v. Multi-Technology System</i> , 357 F.3d 1340 (Fed. Cir. 2004).....	8
<i>Modine Manufacturing Co. v. United States International Trade Commission</i> , 75 F.3d 1545 (Fed. Cir. 1996).....	26
<i>Nystrom v. TREX Co., Inc.</i> , 424 F.3d 1136 (Fed. Cir. 2005).....	8
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005).....	<i>passim</i>
<i>Research Plastics, Inc. v. Packaging Corp.</i> , 421 F.3d 1290 (Fed. Cir. 2005).....	8
<i>SciMed Life System, Inc. v. Advanced Cardiovascular System, Inc.</i> , 242 F.3d 1337 (Fed. Cir. 2001).....	24
<i>Semitool, Inc. v. Novellus Sys.</i> , 44 Fed. Appx. 949 (Fed. Cir. 2002).....	6, 11
<i>Standard Oil Co. v. American Cyanamid Co.</i> , 774 F.2d 448 (Fed. Cir. 1985).....	7
<i>Tandon Corp v. United States International Trade Commission</i> , 831 F.2d 1017 (Fed. Cir. 1987).....	8
<i>Tate Access Floors, Inc. v. Interface Architectural Resource, Inc.</i> , 279 F.3d 1357 (Fed. Cir. 2002).....	27
<i>Terlep v. Brinkman Corp.</i> , 418 F.3d 1379 (Fed. Cir. 2005).....	8

Unique Concepts, Inc. v. Brown,
939 F.2d 1558 (Fed. Cir. 1991).....6

V-Formation, Inc. v. Benetton Group SpA,
401 F.3d 1307 (Fed. Cir. 2005).....9

Vitronics v. Conceptiontronic, Inc.,
90 F.3d 1576 (Fed. Cir. 1996).....6

STATUTES

35 U.S.C. § 112..... *passim*

I. NATURE AND STAGE OF THE PROCEEDINGS

Callaway Golf Company (“Callaway”) filed this lawsuit against Acushnet Company (“Acushnet”) on February 9, 2006, and alleges that Acushnet infringes four golf ball patents of similar subject matter: U.S. Patent Nos. 6,210,293 (“the ‘293 patent”); 6,503,156 (“the ‘156 patent”); 6,506,130 (“the ‘130 patent”); and 6,595,873 (“the ‘873 patent”) (“the patents-in-suit”).¹ Callaway asserts infringement of claims 1, 2, 4, and 5 of the ‘293 patent, claims 1-11 of the ‘156 patent, claims 1, 2, 4, and 5 of the ‘130 patent, and claims 1 and 3 of the ‘873 patent.²

Before Callaway filed this lawsuit, Acushnet submitted to the U.S. Patent and Trademark Office (“the PTO”) requests for *inter partes* reexamination of the patents-in-suit. In those proceedings,³ the PTO examiner has declared through office actions that the claims of each of the patents-in-suit are unpatentable over the teachings of the prior art. [D.I. 185]. Callaway has filed a response to the PTO’s actions, and Acushnet has filed comments to Callaway’s response. [D.I. 185]. The PTO has not yet issued any final office actions in the reexamination proceedings.

Concurrent with this *Markman* brief, Acushnet has filed three summary judgment motions: 1) summary judgment that the asserted claims of the patents-in-suit are invalid over the same art that the PTO has used to reject the claims-in-suit in the co-pending reexaminations; 2) summary judgment that the Nesbitt patent incorporates by reference the Molitor ‘637 patent; and 3) summary judgment on Callaway’s breach of contract claim (Amended Complaint, Count V).

The Court has scheduled a hearing on claim construction and summary judgment for September 28, 2007. A trial, as necessary, is scheduled to commence on December 3, 2007.

¹ The ‘293 patent, ‘156 patent, ‘130 patent, and ‘873 patent are attached hereto as Exhibits A-D, respectively.

² Until recently, Callaway also asserted claims 7 and 8 of the ‘293 patent and claim 6 of the ‘130 patent were infringed, but Callaway has now dropped those claims from its assertions.

³ Reexam Cont. Nos. 95/000,120; 95/000,121; 95/000,122; and 95/000,123. The Requests for Reexamination are attached hereto as Exhibits U, V, W, and X, respectively.

II. SUMMARY OF ARGUMENT

There are only two claim construction disputes that need resolution by the Court. First, the parties dispute whether the “Shore D hardness” of the claimed golf ball cover layers must be measured using the test protocol specified in the patents themselves, ASTM D-2240, or using another method that Callaway proposes for its own self interest. Second, the parties dispute whether the claimed “core” of the golf ball refers to the innermost piece of the golf ball.

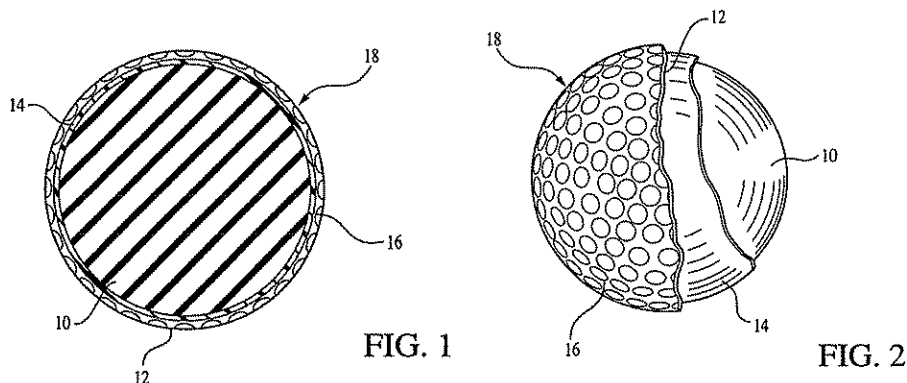
Each asserted claim of the patents-in-suit requires that the inner and/or outer cover layers have a “Shore D hardness” within a claimed range. The term “Shore D hardness” is a term of art in material sciences. In particular, it is a measure of material hardness that is taken according to a predefined standard explicitly referenced in the patents themselves, known as ASTM D-2240. The ASTM D-2240 standard requires that the hardness measurement must be taken on a “plaque” or “slab” of material of precisely specified dimensions, on a flat surface. The specification of the patents-in-suit explicitly refers to this standard, stating that the “Shore D hardness” must be measured “in accordance with ASTM method D-2240.” *See, e.g.*, ‘293 patent, col. 7:19-22. Since the ASTM D-2240 standard explicitly forbids taking a measurement on a “rounded, uneven, or rough surface,” the term “Shore D hardness” cannot refer to a measurement taken on the curved surface of a golf ball, as Callaway proposes. Further, the cover layers on the ball are too thin to be measured using ASTM D-2240. Hence, Callaway’s construction is directly contradictory to the patents’ specifications. Callaway’s proposed construction is also directly contrary to how the term “Shore D hardness” was used during prosecution of the patents-in-suit, where the term was used to refer to hardness measurements taken on a slab of material, or “off the ball.”

The “core” of the golf ball should be construed to mean exactly what it sounds like—the component that occupies the innermost center of the ball—and should not include layers or structures that surround the center. Callaway, on the other hand, proposes that “a core” needs no construction, and is expected to argue that, if it did need construction, everything under the “cover layers” of a ball should be considered part of “a core.” Callaway’s proposal is an attempt

to enlarge its patents to cover balls it did not invent or claim in its patents, such as four-piece golf balls, like Acushnet's Pro V1x and Pro V1* balls. There is nothing in the patents-in-suit that suggests that four-piece golf balls are encompassed by the invention. Instead, the patents consistently only describe a golf ball made up of three components: 1) a core, which is either a single rubber piece or a liquid center with windings; 2) an inner cover layer; and 3) an outer cover layer. The patents-in-suit never suggest the use of multiple solid components under their inner and outer cover layers, and never suggest any reason to depart from how "a core" was understood in 1995: the singular component of the golf ball at its center.

III. STATEMENT OF FACTS

The patents-in-suit generally describe a multilayer golf ball having a core, a hard inner cover layer, and a soft outer cover layer. Figures 1 and 2 of the '293 patent are shown below, and provide a high-level view of the claimed subject matter:



In the patents-in-suit, the inner cover layer of the golf ball is made of low acid ionomer resin having less than 16 percent by weight of alpha, beta-unsaturated carboxylic acid. Some claims of the patents require an inner cover layer of only one low-acid ionomer and others require an inner cover layer made from a blend of at least two low-acid ionomers. *Compare, e.g., '293 patent claims 1 and 4.* The most frequently claimed outer cover layer for the balls of the patents is a soft polyurethane cover, although certain asserted claims of the '130 patent purport to claim more broadly all "non-ionomeric thermoplastic and thermosetting elastomers" as outer cover materials. *See '130 patent, claims 1-2.* The asserted claims of the patents-in-suit

also contain various other limitations, directed to the Shore D hardnesses, flexural modulus, and thicknesses of one or both of the golf ball's cover layers, as well as to the ball's overall weight and diameter.

Each of the patents-in-suit purports to be a continuation of the '585 application, and therefore share similar specifications.⁴ The effective filing date of the patents-in-suit is no earlier than October 13, 1995.⁵ The majority of the disclosure in the specifications of the patents focuses on dual ionomer over ionomer cover layers, and not the polyurethane over ionomer construction eventually claimed by the patents. *See, e.g.*, '293 patent Examples 1-3, cols. 15-22. The specification describes the physical characteristics of a variety of commercially-available materials that have been widely-used in golf ball covers. Table 1, for example, records the various physical properties of ionomer resins such as the flexural modulus of each ionomer taken pursuant to ASTM D-790 and the Shore D hardness of each ionomer taken pursuant to ASTM D-2240. '293 patent, col. 8:30-50. The values recorded in these tables are readily available in material specification sheets available from the manufacturer, DuPont.⁶ The specification

⁴ The patents-in-suit issued from applications claiming priority in part back to U.S. application No. 08/070,510 ("the '510 application"), each of which purports to be a continuation of U.S. application No. 08/870,585 filed on June 6, 1997 ("the '585 application"). The '585 application is a continuation of application No. 08/556,237, which itself is a continuation-in-part of the '510 application filed on June 1, 1993. The patents-in-suit have almost identical specifications which inform the meaning of their claim terms. *See, e.g.*, '293 Patent, Related U.S. Application Data.

⁵ The PTO found that the effective filing date for the '293 patent, '156 patent, and '873 patent is November 9, 1995, and the effective filing date for the '130 patent is October 13, 1995, and Callaway has not asserted an earlier effective filing date in this litigation. Callaway's Supplemental Responses to Acushnet's First Set of Interrogatories No. 4, at 7 (Ex. Z).

In addition, during prosecution of the '156 patent, the Examiner objected to the specification for containing subject matter that was not a part of the parent '878 application or grandparent '293 patent. The applicant purported to remove this new matter, but there are several instances where the applicant did not comply with the Examiner's request and left new matter in the specification. As such, the '156 patent might not be entitled to a November 9, 1995 priority date.

⁶ [REDACTED] *see also* Typical Properties for Selected Industrial Grades of Surlyn® available at: http://www2.dupont.com/Surlyn/en_US/assets/downloads/surlyn_properties_chart.pdf (Ex. T).

describes a process for producing a “conventional solid core” (‘293 patent, col. 14:14-36), and states that inner layer and outer cover layers are added to the core by “molding processes currently well-known in the art.” ‘293 patent, col. 15:14-26.

The remainder of the specification is devoted to discussions of four example golf balls. Examples 1-3 are three piece golf balls with outer and inner layers composed of ionomers. *See e.g.*, 293 patent, col. 15:65-22:27. Example 4, the only example teaching the use of polyurethane covers, describes a golf ball with an inner layer of ionomer and an outer cover layer of castable polyurethane. *See e.g.*, 293 patent, col. 22:31-23:40.

IV. ARGUMENT

A. Legal Standards Applicable to Claim Construction

1. The Claims Should be Construed in Light of the Intrinsic Evidence

a. The Claim Language

“‘[T]he claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*quoting Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). “In construing claims, the analytical focus must begin and remain centered on the language of the claims themselves, for it is that language that the patentee chose to use” *Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001).

Claim words and phrases should be accorded “their ordinary and customary meaning.” *Phillips*, 415 F.3d at 1312. Ordinary and customary meaning is, however, a term of art. It “is the meaning that the term would have to a person of ordinary skill in the art . . . at the time of the invention.” *Id.* In other words, defining the “ordinary and customary” meaning compels a finding of what would be understood by one with familiarity with the subject matter of the patent, as opposed to the understanding that a lay person would derive from a review of the intrinsic evidence. Thus, the review of all of the intrinsic and extrinsic evidence as relied upon

by the Court is done for the purpose of ascertaining what one skilled in the art would understand as the invention and the limitations of the invention.

b. In Construing a Claim Term, the Scope of Coverage is Defined by Reference to the Remaining Sources of Intrinsic Evidence

Patent claims are not reviewed and construed in isolation. The Federal Circuit has established a “hierarchy” that customarily should be employed to construe the claims of a patent. This hierarchy identifies as the most important and informative evidence that which is classified as intrinsic evidence, which comes from three sources: the claims themselves, the specification, and file wrapper or prosecution history. *See Unique Concepts, Inc. v. Brown*, 939 F.2d 1558, 1561 (Fed. Cir. 1991); *Phillips*, 415 F.3d at 1314.

(1) In Construing a Claim Term, the Court Should Look to the Specification for Guidance

The Federal Circuit has explained that the patent specification has a “central importance” in claim construction which stems from the fact that “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Aquatex Indus. v. Techniche Solutions*, 419 F.3d 1374, 1380 (Fed. Cir. 2005) (quoting *Phillips*, 415 F.3d at 1313). For this reason, claim terms must be interpreted “in view of the specification, of which they are a part.” *Markman v. Westview Instruments*, 52 F.3d 967, 979 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370 (1996). “The specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Vitronics v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). Particular to the issues of this brief, the specification acts as a dictionary when it expressly defines terminology used in the claims or when it defines claim terms by implication. *See Markman*, 52 F.3d at 979; *Semitool, Inc. v. Novellus Sys.*, 44 Fed. Appx. 949, 954 (Fed. Cir. 2002) (“When the

meaning of a term used in a claim is sufficiently clear from its definition in the patent specification, that meaning shall apply.”)

(2) **In Construing a Claim Term, the Court
Should Look to the Prosecution History
for Guidance**

The file wrapper or prosecution history of a patent is also important. As stated by the Supreme Court nearly 40 years ago, “an invention is construed not only in light of the claims, but also with reference to the file wrapper or prosecution history in the Patent Office.” *Graham v. John Deere Co.*, 383 U.S. 1, 33 (1966). The file wrapper or prosecution history “provides evidence of how the PTO and the inventor understood the patent” and “was created by the patentee in attempting to explain and obtain the patent.” *Phillips*, 415 F.3d at 1317. The significance of this concept, placed in the context of the requirements of patentability found in 35 U.S.C. § 112, was specifically addressed by the Federal Circuit in *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448 (Fed. Cir. 1985):

[T]he prosecution history (sometimes called the “file wrapper and contents”) of the patent . . . includes all express representations made by or on behalf of the applicant to the examiner to induce a patent grant Such representations included amendments to the claims and arguments made to convince the examiner that the claimed invention meets the statutory requirements of novelty, utility, and nonobviousness. ***Thus, the prosecution history (or file wrapper) limits the interpretation of claims so as to exclude any interpretation that may have been disclaimed or disavowed during prosecution in order to obtain claim allowance.***

Id. at 452 (emphasis added). A patent holder cannot construe a term one way for purposes of obtaining a patent during prosecution, and then another way during litigation. See *Hockerson-Halberstadt, Inc. v. Avia Group Int’l*, 222 F.3d 951, 956 (Fed. Cir. 2000); *CVI/Beta Ventures v. Tura LP*, 112 F.3d 1146, 1158 (Fed. Cir. 1997) (“through statements made during prosecution . . . an applicant for a patent . . . may commit to a particular meaning for a patent term, which meaning is then binding in litigation”).

c. Claim Terms Are Presumed to be Used Consistently Throughout the Patent

Apart from the evidence upon which claim construction may be based, claim construction involves various “canons.” One such canon is that “claim terms are presumed to be used consistently throughout the patent, such that the usage of a term in one claim can often illuminate the meaning of the same term in other claims.” *Research Plastics, Inc. v. Packaging Corp.*, 421 F.3d 1290, 1295 (Fed. Cir. 2005) (citing *Phillips*, 415 F.3d at 1313-14). On the other hand, “[w]hen different words or phrases are used in separate claims, a difference in meaning is presumed.” *Nystrom v. TREX Co., Inc.*, 424 F.3d 1136, 1143 (Fed. Cir. 2005) (citing *Tandon Corp v. United States Int’l Trade Comm’n*, 831 F.2d 1017, 1023 (Fed. Cir. 1987)).

The Court is also permitted to rely on the disclosure of related patents in the same family as the patent-in-suit. *See, e.g., Microsoft Corp. v. Multi-Tech Sys.*, 357 F.3d 1340, 1349-50 (Fed. Cir. 2004) (“[W]e have held that the prosecution history of one patent is relevant to an understanding of the scope of a common term in a second patent stemming from the same parent application.”); *Jonsson v. Stanley Works*, 903 F.2d 812, 818 (Fed. Cir. 1990).

d. Extrinsic Evidence Cited in the Patent or its Prosecution History Should be Treated as Intrinsic Evidence

In addition to “intrinsic” evidence, “extrinsic” evidence may also be useful in claim construction. *Terlep v. Brinkmann Corp.*, 418 F.3d 1379, 1382 (Fed. Cir. 2005). When a source of what might otherwise be classified as extrinsic evidence is explicitly cited in the specification or prosecution history of a patent, however, courts have treated it as part of the intrinsic evidence. *See Goldenberg v. Cytogen, Inc.*, 373 F.3d 1158, 1167 (Fed. Cir. 2004) (“prior art cited in a patent or cited in the prosecution history of the patent constitutes intrinsic evidence” (citing *Kumar v. Ovonic Battery Co., Inc.*, 351 F.3d 1364, 1368 (Fed. Cir. 2003))); *Arthur A. Collins, Inc. v. N. Telecom Ltd.*, 216 F.3d 1042, 1045 (Fed. Cir. 2000) (adopting the meaning of a claim term as used in the patents referred to in the written description). In particular, when a patent specification refers to an industry standard, it is appropriate to treat that industry standard

as intrinsic evidence for purposes of claim construction. *Chimie v. PPG Indus.*, 402 F.3d 1371, 1378-80 (Fed. Cir. 2005) (construing terms "dust-free and non-dusting" consistent with test technique provided in DIN 53 583 standard cited in specification); *LG Elecs., Inc. v. Bizcom Elecs., Inc.*, 453 F.3d 1364, 1375 (Fed. Cir. 2006) (citing *V-Formation, Inc. v. Benetton Group SpA*, 401 F.3d 1307, 1311 (Fed. Cir. 2005)).

B. Proper Construction of the Disputed Claim Terms

The parties dispute the proper construction of two key terms: "Shore D hardness" and "a core." The '293 patent, claim 1, contains representative recitations of the disputed language:

1. A golf ball comprising:

a **core**;

an inner cover layer having a Shore D hardness of 60 or more molded on said core, said inner cover layer having a thickness of 0.100 to 0.010 inches, said inner cover layer comprising a blend of two or more low acid ionomer resins containing no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid; and

an outer cover layer having a Shore D hardness of 64 or less molded on said inner cover layer, said outer cover layer having a thickness of 0.010 to 0.070 inches, and said outer cover layer comprising a relatively soft polyurethane material.
(emphasis added)

'293 patent, col. 23:47-61. Each of the asserted claims recites similar limitations.⁷ The parties' Joint Claim Chart [D.I. 191] sets forth each asserted claim, with the relevant claim language to be construed highlighted.

⁷ All of the asserted claims recite a "core" or a "spherical core." All of the asserted claims recite a limitation on the "Shore D hardness" of the inner cover layer. All of the asserted claims except claims 4, 6-8, and 10-11 of the '156 patent recite a limitation on the "Shore D hardness" of the outer cover layer.

1. Proper Construction of “Shore D hardness”

The parties’ proposed constructions of the “Shore D hardness” limitations are set forth in the table below:

Claim Term or Phrase	Acushnet’s Proposed Construction	Callaway’s Proposed Construction
“inner cover layer having a Shore D hardness”	The hardness of a slab of the cover layer material on the Shore D scale as measured in accordance with ASTM D-2240. This is sometimes referred to as an “off the ball” measurement.	The Shore D hardness measurement is performed on the inner cover layer on the ball.
“outer cover layer having a Shore D hardness	The hardness of a slab of the cover layer material on the Shore D scale as measured in accordance with ASTM D-2240. This is sometimes referred to as an “off the ball” measurement.	The Shore D hardness measurement is performed on the outer cover layer on the ball.

As shown above, the parties dispute whether the “Shore D hardness” limitations recited in the asserted claims refer to measurements taken “off the ball” or “on the ball.” Specifically, Acushnet contends that the Shore D hardness of a cover layer must be measured in accordance with industry standard ASTM D-2240, which expressly requires a measurement to be taken on a “plaque” or “slab” of material. This is sometimes called an “off the ball” measurement. In contrast, Callaway contends that the Shore D hardness of a cover layer must be measured directly on the curved surface of the cover layer molded on the golf ball. This is sometimes called an “on the ball” measurement.

There is no dispute that the golf ball industry sometimes measures and reports Shore D hardness of golf ball cover layers as measured “off the ball” and sometimes measures and reports Shore D hardness of golf ball cover layers as measured “on the ball.” However, the pertinent

question for claim construction is how the term “Shore D hardness” as used in the claims of the patents-in-suit would be understood by a person of ordinary skill in the art reviewing the patents.

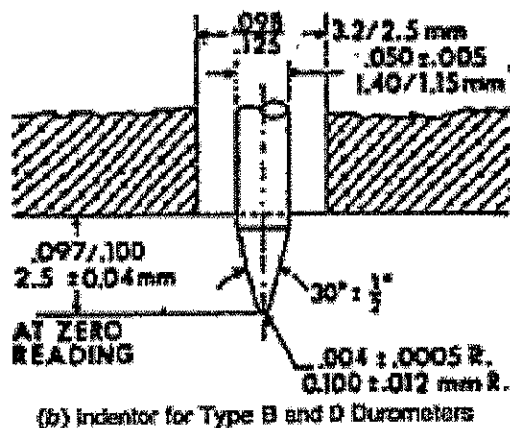
In this case, the patents-in-suit explicitly instruct the reader that “Shore D hardness” is “measured in accordance with ASTM method D-2240.” *See, e.g.*, ‘293 patent, col. 7:19-22. When a patentee explicitly defines a term in the specification, that definition is controlling. *Semitool*, 44 Fed. Appx. at 954. In addition, when a patent, as here, refers to an industry standard for the definition of a term, that industry standard definition is controlling. *Chimie*, 402 F.3d at 1378-80 (construing terms “dust-free and non-dusting” consistent with test technique provided in DIN 53 583 standard cited in specification). The definition of “Shore D hardness” provided by D-2240 is the only definition that is consistent with the specification, the language of the claims of the patents-in-suit, and the prosecution history.

a. ASTM D-2240 Defines Shore D Hardness and Excludes an “On the Ball” Measurement

Shore D hardness refers to a measurement taken by a particular measuring device, known as a Type D Shore Durometer, as defined by an industry standard published by the American Society for Testing and Materials (ASTM). ASTM D-2240 describes seven types of durometer devices used to measure hardness, as well as the testing procedures utilized for each type of durometer. *See* Ex. I, ASTM D-2240, § 1.1, at 1. The method is “based on the penetration of a specific type of indenter when forced into the material under specified conditions.” *Id.* at § 4.1. Generally speaking, the measured hardness of a particular material sample is inversely related to the amount of penetration of the indenter into the material under those specified conditions. *Id.*

The “D” designation in “Shore D” refers to the particular type of durometer that is used to measure the hardness of the material.⁸ The figure below depicts the Type D durometer indenter that is used to penetrate a particular sample of material to measure Shore D hardness.

⁸ In addition to Type D durometers, the ASTM D-2240 test also specifies Types A, B, C, DO, O, and OO durometers. Ex. I, ASTM D-2240, § 1.1.



ASTM D-2240, § 5, at 2.

ASTM D-2240 sets forth specific parameters for the test specimen. The standard specifies that “the test specimen shall be at least 6mm (0.25 in.) in thickness . . .” *Id.* at 6.1. It also requires that “the lateral dimensions of the specimen shall be sufficient to permit measurements at least 12 mm (0.5 in.) from any edge . . .” *Id.* Additionally, “[t]he *surfaces of the specimen shall be flat and parallel* over a sufficient area to permit the presser foot to contact the specimen over an area having a radius of at least 6 mm (0.25 in.) from the indenter point.” *Id.* at § 6.1 (emphasis added). Finally, the portion of the standard most pertinent to this claim construction dispute also explicitly warns against measurement of other types or shapes of samples, stating that “*A suitable hardness measurement cannot be made on a rounded, uneven, or rough surface.*” *Id.* (emphasis added).⁹

Callaway’s proposed definition of “Shore D hardness,” which requires taking a hardness measurement on the surface of the cover layer when molded on the ball, is inconsistent with ASTM D-2240. Section 6.1 of ASTM D-2240 in fact prohibits taking measurements on a “rounded” surface like a golf ball to achieve a suitable hardness measurement in compliance with the standard. A golf ball’s surface is of course rounded. Additionally, all modern golf balls have various dimple patterns molded into their outer cover layers, creating an uneven surface. In

⁹ The ASTM D-2240 standard also sets forth precise conditioning requirements before a measurement can be taken, such as the temperature and humidity at which the measurements must be performed. *Id.* § 8.1, at 2.

addition, ASTM D-2240 requires that the measured sample be at least 6 mm thick, which sample thickness is not met by any of the layers of the golf ball cover once molded on the ball. Hence, Callaway's proposed construction flatly contradicts the directions of the specification as to the measurement of the Shore D hardness using ASTM D-2240.

Callaway's technical expert, Dr. Risen, admits that a measurement of hardness taken on the curved surface of a golf ball cover layer is not in compliance with the ASTM D-2240 standard. Risen Tr. (Ex. L) at 121:14-18. Callaway itself admits, as it did in its Response to the PTO's rejections of its claims in the concurrent reexamination of its patents, that "ASTM D-2240 requires measuring the Shore D hardness of a material using a 0.25 inch thick plaque of material." Ex. Y, Response to Office Action Mailed January 30, 2007, in Reexamination Control No. 95/000,122, at 10. Accordingly, there can be no dispute that an "on the ball" measurement, as Callaway's definition requires, does not satisfy the ASTM D-2240 standard.

**b. The Specifications of the Patents-in-Suit
Explicitly State that Shore D Measurements Are
Taken in Accordance with ASTM D-2240**

The specifications of the patents-in-suit define "Shore D hardness" as a measurement "in accordance with ASTM method D-2240." *See, e.g.*, '293 patent, col. 7:19-22. *See also* '293 patent, col. 16:49-50 ("Shore hardness was measured in accordance with ASTM test 2240.").

In addition, many of the Shore D hardness measurements reported in the specifications of the patents are indisputably "off the ball" measurements. For example, the specifications list properties of materials that are used in the cover layers of the claimed balls, including the Shore D hardness measurements reported in the data sheets for those materials. *See, e.g.*, '293 patent, Tables 1 (properties of Surlyn® ionomers), 2 (properties of Iotek ionomers), 3 (properties of Iotek 7520 ionomer), 4 (properties of Iotek 7510 and 7520); col. 13:6-19 (properties of Estane® X-4517), col. 20:61-21:15 (properties of Iotek 959 and 960). Table 3 in particular lists the "Shore D hardness" for Iotek 7520 under a heading labeled "Plaque Properties (2mm thick Compression Molded Plaques)," and specifically refers to the ASTM D-2240 standard:

TABLE 3

<u>Physical Properties of Iotek 7520</u>			
Property	ASTM Method	Units	Typical Value
Melt Index	D-1238	g/10 min.	2
Density	D-1505	kg/m ³	0.962
Cation			Zinc
Melting Point	D-3417	° C.	66
Crystallization Point	D-3417	° C.	49
Vicat Softening Point	D-1525	° C.	42
<u>Plaque Properties (2 mm thick Compression Molded Plaques)</u>			
Tensile at Break	D-638	MPa	10
Yield Point	D-638	MPa	None
Elongation at Break	D-638	%	760
1% Secant Modulus	D-638	MPa	22
Shore D Hardness	D-2240		32
Flexural Modulus	D-790	MPa	26
Zwick Rebond	ISO 4862	%	52
De Mattia Flex Resistance	D-430	Cycles	>5000

See, e.g., '293 patent, col. 11:38-60.

Callaway seems to rely on portions of the specification where, it contends, certain Shore C and Shore D measurements are described. Callaway says that these passages describe hardness measurements "on the ball." While the passages Callaway points to (e.g., Tables 5-9) are at best ambiguous as to how the measurement is made, none of this changes the fact that the specifications of the patents-in-suit unambiguously **define** how to make the claimed Shore D measurement.

**c. The Claim Language of the Patents-in-Suit
Supports Acushnet's Proposed Construction**

Callaway's principal argument in support of its proposed claim construction is that the claims recite a Shore D hardness of the "cover layer" rather than of the "cover layer material." Callaway contends that this language suggests an "on the ball" measurement rather than an "off

the ball” measurement. In fact, a consistent reading of the language of the claims compels the opposite conclusion.

For example, claim 6 of the ‘130 patent recites, in part: “said outer cover layer having a modulus in the range of about 1,000 to about 30,000 psi and a Shore D hardness of 64 or less.” ‘130 patent, col. 24:1-3. Claims 7 and 8 of the ‘293 patent recite that the “outer cover layer” has the same claimed modulus. ‘293 patent, col. 24:47-65. Thus, these claims require that the “outer cover layer” has two properties: a) a modulus in the range of 1,000 to 30,000; and b) a Shore D hardness of 64 or less.

The term “modulus” refers to the flexural modulus of a material, as measured in accordance with another ASTM test, D-790. The patents-in-suit explicitly state that modulus must be measured in accordance with ASTM D-790. *See, e.g.*, ‘293 patent, col. 7:16-20.¹⁰ Flexural modulus, generally speaking, provides a measure of the stiffness of a material; *i.e.*, how difficult it is to bend or flex. Ex. J, ASTM D-790, § 1, at 1. There is no dispute that ***flexural modulus cannot be taken on the curved surface of a golf ball***. The machine that tests flexural modulus is specially designed for a plaque of material of specified dimensions. *Id.*, at § 7. Indeed, both of Callaway’s technical expert witnesses admit that flexural modulus cannot be taken on a cover layer when it is formed on the golf ball. Wilkes Tr. (Ex. K) at 114:21-115:12; Risen Tr. (Ex. L) at 105:2-5. Instead, the only way to measure flexural modulus is to form a material into a sample of the size and shape specified by ASTM D-790, and to use the flex modulus machine to perform the measurement on that sample. *Id.*; Wilkes Tr. (Ex. K) at 112:8-113:2.

Since flexural modulus is a measurement that can be taken only “off the ball,” the claims that require an “outer cover layer” with a certain modulus must necessarily require an “off the

¹⁰ Callaway agrees that flexural modulus must be measured according to ASTM D-790. As set forth in the Joint Claim Chart, the parties agree that the phrase “modulus” as applied to the inner cover layer refers to “the flex or flexural modulus of any low acid ionomeric resin in the inner cover layer as measured in accordance with ASTM D-790.” Joint Claim Chart [D.I. 191], at 2.

ball” measurement of that property, rather than an “on the ball” measurement. And since the claims also recite that the “outer cover layer” has a Shore D hardness, it follows that the Shore D hardness should also be taken “off the ball.”

Notably, Callaway recently dropped assertion of claim 6 of the ‘130 patent, and claims 7 and 8 of the ‘293 patent, despite having previously asserted those claims throughout this lawsuit. In doing so, it perhaps hoped to shield this language from the Court’s review and scrutiny. Still, terms of a patent are presumed to be used consistently throughout the claims, whether asserted or not. *See, e.g., Phillips*, 415 F.3d at 1314. In this case, the patents-in-suit, particularly the claims recently dropped, refer to the “outer cover layer” as having a certain “modulus” and a certain “Shore D hardness.” There can be no dispute that flexural modulus cannot be measured “on the ball” as formed, and instead must be measured on a plaque of material. Similarly, there should be no question that the Shore D hardnesses of the cover layers of the claimed invention, as set forth in the patents, should also be measured on a plaque of material.

d. Spalding Obtained the Patents-in-Suit by Referring to “Off the Ball” Shore D Hardness Measurements During Prosecution

If there were any doubt as to how the term “Shore D hardness” as used in the claims should be construed, the arguments and amendments made during the prosecution of the patents-in-suit remove it. During prosecution of the ‘156 and ‘873 patents, the examiner rejected claims under 35 U.S.C. § 112 on the basis that there was no written description support for the limitation that the “outer cover layer” had a “Shore D hardness of 64 or less.”¹¹ Ex. F (‘156 prosecution history), at CW0308125; Ex. H (‘873 prosecution history), at CW0309064.

In response to these rejections, Spalding, the applicant, amended the specification of those patents to include written description support for the claimed Shore D hardness range of the “outer cover layer.” In doing so, however, Spalding disclosed a range of Shore D hardnesses

¹¹ The original prosecution histories of the ‘293 patent, ‘156 patent, ‘130 patent, and ‘873 patent are attached hereto as Exhibits E-H, respectively.

for the cover layers as measured “off the ball,” rather than “on the ball.” Specifically, Spalding amended the specification to add the following sentence: “Preferably, the non-ionomeric thermoplastic elastomers [used to produce the outer cover layer] have a Shore D hardness of 64 or less.” *See, e.g.*, ‘156 patent, col. 12:58-59; *see also*, ‘130 patent, col. 11:57-59; ‘873 patent, col. 12:63-64. This passage unambiguously refers to the hardness of the material used to produce the outer cover layer, rather than the “on the ball” measurement of the outer cover layer itself.

For example, during prosecution of the ‘156 patent, the examiner rejected all pending claims under 35 U.S.C § 112, stating “the hardness for the outer cover layer is not supported by the original disclosure.” Ex. F, Application Serial No. 09/873,642, Final Office Action, Sept. 10, 2002, at 2 (CW0308125). In response, Spalding argued that the claimed hardness range for the outer cover layer was supported by the original disclosure in a parent application, and offered to amend the patent specification to explicitly include support for that hardness range. Ex. F, Application Serial No. 09/873,642, Response to Final Office Action, Sept. 19, 2002, at 2 (CW0308129) (emphasis added) (“Applicant would be amenable to amending the specification to contain this specific language if required by the Examiner.”). Following that response, Spalding stated in an examiner interview that it would “amend the specification to include the Shore D hardness of the outer layer.” Ex. F, Application Serial No. 09/873,642, Interview Summary, Sept. 25, 2002, at 3 (CW0308150).

The next day, Spalding amended the specification to recite the claimed range of hardnesses for the outer cover layer. But the amended specification clearly refers to “off the ball” measurements of the material that is used in the outer cover layer, rather than an “on the ball” measurement of the outer cover layer.” Spalding argued that by providing such a disclosure, it had disclosed the preferred Shore D hardness of the “outer cover layer”:

Other soft, relatively low modulus non-ionomeric *thermoplastic elastomers may also be utilized to produce the outer cover layers* the non-ionomeric thermoplastic elastomers produce the playability and durability characteristics desired without adversely effecting the enhanced spin characteristics produced by

the low acid ionomer resin compositions. *Preferably, the non-ionomeric thermoplastic elastomers have a Shore D hardness of 64 or less.* These include, but are not limited to thermoplastic polyurethanes such as: Texin® thermoplastic polyurethanes from Mobay Chemical Co. and the Pelletane® thermoplastic polyurethanes from Dow Chemical Co.; Ionomer/rubber blends such as those in Spalding U.S. Pat. Nos. 4,986,545; 5,098,105 and 5,187,013; and, Hytrel® polyester elastomers from DuPont and Pebax® polyesteramides from Elf Atochem S.A.

Ex. F, Application Serial No. 09/873,642, Supplemental Response to Final Office Action, Sept. 26, 2002, at 5 (CW0308139) (emphasis added, underlining in original, showing amendment from original specification).

Spalding also made similar amendments to the specification in the prosecutions of the '130 and '873 patents in response to rejections in those applications. See Ex. G, Application Serial No. 09/776,278, Response to Final Office Action Mar. 19, 2003, at 6 (CW0309110); Ex. H, Application Serial No. 09/832,154, Supplemental Amendment, Sept. 26, 2002, at 5 (CW0308842).

Thus, when forced to amend its specifications to provide written description support for an "outer cover layer" with a "Shore D hardness of 64 or less," Spalding disclosed the hardness of the elastomer material "utilized to produce the outer cover layer," rather than disclosing an "on the ball" measurement of a cover layer.

Since the applicant overcame the examiner's rejections by using a definition of Shore D hardness of the outer cover layer that referred to measurements "off the ball," Callaway cannot now argue that the Shore D hardness limitations should refer to "on the ball" measurements. See *Hockerson-Halberstadt*, 222 F.3d at 956; *CVI/Beta Ventures* 112 F.3d 1146 at 1158.

e. Related Patents in the Same Family as the Patents-in-Suit Support Acushnet's Proposed Construction

A comparison between the patents-in-suit and other patents in the same patent family also sheds important light on the meaning of the "Shore D hardness" claimed in the patents-in-suit.

Unlike the patents-in-suit, many patents in the same family explicitly state that Shore D hardness measurements should be taken on the curved surface of the golf ball.

For example, U.S. Patent No. 6,213,894 (“the ‘894 patent”) explicitly states that the “Shore D hardness” of the outer cover layer should be measured on the curved surface of the golf ball.¹² The ‘894 patent derives from the same application from which the patents-in-suit derive (Serial No. 08/070,510 (“the ‘510 application”)).¹³ In addition, the ‘894 patent was filed before the ‘293 patent, was pending at the same time as the ‘293 patent, and issued only one week later. The specification of the ‘894 patent states:

As used herein, *"Shore D hardness" of a cover is measured generally in accordance with ASTM D-2240, except the measurements are made on the curved surface of a molded cover, rather than on a plaque.* Furthermore, the Shore D hardness of the cover is measured while the cover remains over the core. When a hardness measurement is made on a dimpled cover, Shore D hardness is measured at a land area of the dimpled cover.

‘894 patent, col. 46:40-48 (emphasis added). That description of “Shore D hardness” is in stark contrast to the description in the patents-in-suit, which instead states that Shore D hardness is “measured in accordance with ASTM method D-2240.” *See, e.g.*, ‘293 patent, col. 7:19-22.

The claims of the ‘894 patent also provide an instructive comparison to the claims of the patents-in-suit. Claim 1 of the ‘894 patent recites, in part: “the inner cover layer having a Shore D hardness of at least 60 *as measured on the curved surface thereof. . .*” Ex. M, ‘894 patent, claim 1 (emphasis added). That language is in stark contrast to the claims of the patents-in-suit. For example, claim 1 of the ‘293 patent recites, in part: “an inner cover layer having a Shore D hardness of 60 or more...” Unlike the ‘894 patent, the patents-in-suit contain no additional language that suggests the Shore D measurements should be taken on the curved surface of the cover layer.

¹² The ‘894 patent is attached hereto as Ex. M.

¹³ The ‘894 patent was filed on March 18, 1998, and issued to Spalding on April 10, 2001. The ‘894 patent lists as inventors Mr. Sullivan (the same inventor as the patents-in-suit), as well as John Nealon and Mark Binette. Ex. M.

The disclosure of the '894 patent demonstrates two important points. First, it shows that the inventor of the patents-in-suit recognized that a measurement taken on the curved surface of a golf ball is not in accordance with the ASTM D-2240 test. Thus, when the patents-in-suit state that the Shore D hardness is taken "in accordance with ASTM method D-2240" (*see, e.g.*, '293 patent, col. 7:19-22), they cannot refer to a measurement taken on the curved surface of a ball.

Second, this disclosure shows that when Spalding wanted to specially define Shore D hardness to mean a measurement taken on the curved surface of the golf ball, rather than in accordance with ASTM D-2240, it did so. When Spalding did not want to apply that special definition to the term "Shore D hardness," such as in the patents-in-suit, it did not include descriptions such as those set forth in the '894 patent.

The '894 patent is only one of many patents in the same family as the patents-in-suit that includes the explicit language that the Shore D measurement should be taken on the curved surface of the ball. Many other patents in the '510 patent, listing Mr. Sullivan as an inventor, contain very similar language in both the specification and the claims. *See, e.g.*, U.S. Patent Nos. 6,083,119 (Ex. N); 6,319,153; (Ex. O); 6,287,217 (Ex. P).

2. Proper Construction of "core"

The parties' proposed constructions for the term "core" are set forth in the table below:

Claim Term or Phrase	Acushnet's Proposed Construction	Callaway's Proposed Construction
"core"	The singular component of the golf ball that occupies the geometric center of the sphere of the golf ball	Since the term "core" is understood by both those skilled and not skilled in the art, no construction is necessary. However, if the Court determines that a construction is needed, Callaway Golf disagrees with Acushnet's construction and offers the following competing construction: "the

		foundational part of a golf ball, over which one or more cover layers may be applied.”
--	--	--

The crux of the parties’ dispute is whether the term “core” can include more than one solid component of the golf ball. Acushnet contends that the term “core” should mean exactly what it sounds like: the innermost component of the golf ball. This is the only reasonable construction that provides a well-defined scope to the claims, and which is supported by the written description. In contrast, Callaway suggests that the term “core” should not be construed at all. Callaway’s proposed alternative definition lacks any well-defined scope, and it is not supported by the written description of the patents-in-suit.

Callaway’s approach to the construction of the term “core” appears to be aimed at expanding the scope of the patents-in-suit to include four-piece golf ball constructions, like that of Acushnet’s Pro V1x and Pro V1* golf balls, which are accused of infringement. However, to do so requires a reading of the term “core” that is inconsistent with how that term is used in the specification; namely to include more than one solid component of the golf ball. In addition, since multiple-piece cores were well known in the art at the effective filing date of the patents-in-suit, if Spalding intended for the term “core” to mean multiple components of a golf ball, it would have so stated, as it did in other related patents.

**a. The Specifications of the Patents-in-Suit
Describe only Wound Cores and One-Piece Solid Cores**

The patents-in-suit describe a golf ball with three components: a core, an inner cover layer, and an outer cover layer. *See, e.g.*, ‘293 patent, col. 14:42-46. The core, as described by the patents-in-suit, can be either a wound core or a solid core, although solid cores are described as preferred. *See, e.g.*, ‘293 patent, col. 15:23-26 (“Although either solid cores or wound cores can be used in the present invention, as a result of their lower cost and superior performance, solid molded cores are preferred over wound cores.”).

Every example of the patents-in-suit uses a unitary single-piece solid core. In particular, the patents-in-suit describe the use of a “conventional solid core[]” as the core of the golf ball. ‘293 patent, col. 14:16-22. The specific composition of the conventional solid cores used in the examples is a rubber-based composition that is compression molded into a single solid component of homogeneous material. ‘293 patent, col. 14:14-22; 16:15-30.

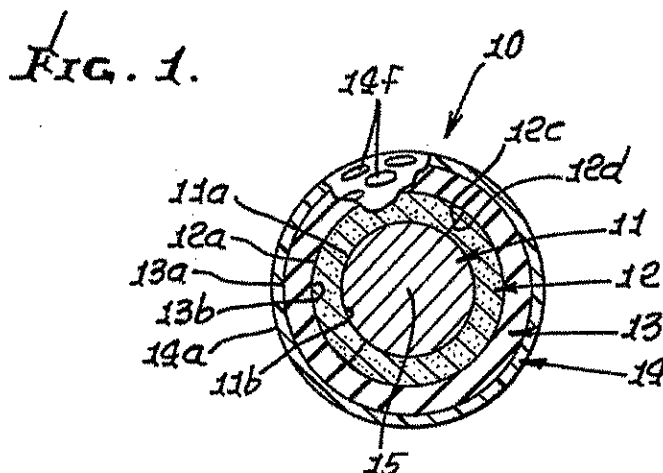
Thus, in the examples of the patents-in-suit, which describe a ball with only three components, the identification of the “core” is relatively straightforward. The “core” in those examples is the innermost component of the three-component ball.

There is nothing in the patents-in-suit that suggests that the term “core” can refer to more than one solid component of a golf ball. Indeed, the patents-in-suit do not disclose or describe dual-core balls—or any solid balls with more than one component beneath the cover layers. Accordingly, there is nothing to suggest that the use of a dual-core construction was within the possession of the inventor at the time he filed for the patents-in-suit.

**b. Multi-Component Cores were Known in the Art
at the Time the Patents-in-Suit were Filed**

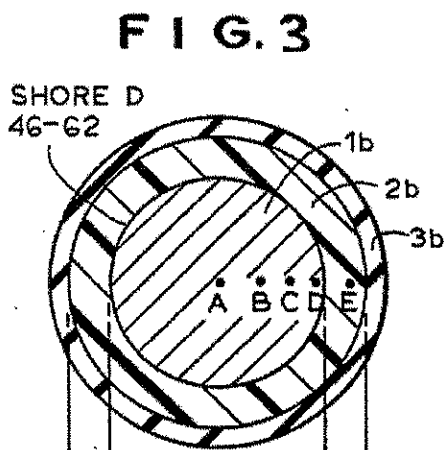
Prior to the effective filing date of the patents-in-suit in 1995, multi-component solid cores were well-known in the golf ball art. For example, U.S. Patent No. 5,273,286 (“the ‘286 patent”), issued on December 28, 1993, describes a four-piece golf ball, as depicted below.¹⁴

¹⁴ The ‘286 patent is attached hereto as Exhibit Q.



The specification of the '286 patent refers to the innermost component of the golf ball as an "inner core," the second component as an "intermediate core," the third component as an "outer core," and the fourth component as a "cover." Ex. Q, '286 patent, col. 2:5-19.

Similarly, U.S. Patent No. 5,184,828 ("the '828 patent"), issued on February 9, 1993, describes a three piece golf ball, as depicted below:¹⁵



The '828 patent refers to the innermost component as the "inner core," the second component as the "outer layer," and the outermost component as the "cover." Ex. AA, '828 patent, col. 2:2-6. The '828 patent refers to the combination of the "inner core" and the "outer layer" as the "core assembly." *Id.*, col. 16-21.

¹⁵ The '828 patent is attached hereto as Exhibit AA.

Neither of these two patents refer to multiple solid components together as the “core” of the golf ball. More importantly, given the fact that it was well known prior to the effective filing date of the patents-in-suit to use multiple solid layers under the cover, a person of ordinary skill in the art would expect that Spalding would have defined how the term “core” would apply to such a construction. However, Spalding chose not to describe such cores in the patents-in-suit. This is in stark contrast to other Spalding patents, in the same family as the patents-in-suit, in which Spalding explicitly included such multi-piece cores in its definition of “core.” For example, the ‘894 patent, discussed above, states:

The term "solid cores" as used herein refers not only to one piece cores but also to those cores having a separate solid layer beneath the covers and over the central core.

Ex. M, ‘894 patent, col. 22:57-60.¹⁶ Thus, when Spalding wanted to include multiple pieces in the definition of “core,” it did so explicitly. In contrast, the patents-in-suit, contain no such description of a multiple pieces. Thus, a person of ordinary skill in the art would not understand that the term “core” would apply to include both pieces of a two-piece core. Instead, the natural reading of the term “core” would be the innermost component of the ball, whatever that may be for the particular construction under examination.

c. The term “core” should not be construed broader than would be supported by the written description

Claims should not be construed to be broader than the scope of the invention that is supported by the written description of the patents-in-suit under 35 U.S.C. § 112. *Alloc, Inc. v. United States Int’l Trade Comm’n*, 342 F.3d 1361, 1370 (Fed. Cir. 2003) (citing *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1345 (Fed. Cir. 2001)).

The Federal Circuit has made clear that broad claims that are construed to have a scope beyond that which is supported by the written description of the patent at issue are invalid. *See*,

¹⁶ Similar descriptions of “solid cores” are set forth in many other patents related to the patents-in-suit. *See, e.g.*, 6,083,119 (Ex. N); 6,287,217 (Ex. P).

e.g., *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336 (Fed. Cir. 2005). In *LizardTech*, the claim at issue was directed to creating a “seamless array of DWT coefficients generically.” 424 F.3d at 1345. The specification, on the other hand, described “a particular method for creating a seamless DWT,” and taught “only that method of creating a seamless array.” *Id.* There, the Federal Circuit held that

[I]t is unnecessary to spell out every detail of the invention in the specification; only enough must be included to convince a person of skill in the art that the inventor possessed the invention and to enable such a person to make and use the invention without undue experimentation. In this case, however, LizardTech has failed to meet either requirement. After reading the patent, a person of skill in the art would not understand how to make a seamless DWT generically and would not understand LizardTech to have invented a method for making a seamless DWT, except by [the particular method disclosed].

Id. (emphasis added).

In invalidating the claim at issue, the Federal Circuit stated that narrow embodiments claim can only provide written description support for a broadly construed claim “if the specification would ‘reasonably convey to a person skilled in the art that [the inventor] had possession of the claimed subject matter at the time of filing,’ ... and would ‘enable one of ordinary skill to practice ‘the full scope of the claimed invention.’” *Id.* at 1346 (internal citations removed) (citing *Bilstad v. Wakalopoulos*, 386 F.3d 1116, 1125 (Fed. Cir. 2004); *Chiron Corp. v. Genentech, Inc.*, 363 F.3d 1247, 1253 (Fed. Cir. 2004)).

In this case, if the term “core” were construed to include dual-core constructions, the claim would be impermissibly broad, and would be invalid for lack of written description. Here, the specifications of the patents-in-suit describe only a wound core or a single-piece solid core as the core of the claimed golf ball. There is no description whatsoever that suggests that the inventor was in possession of an invention that included dual-core construction. Indeed, the fact that dual-core construction golf balls were well known in the art by 1995 and that the patents do not mention dual-core technology as a possibility suggests that dual-core technology was not in

the possession of the inventor. Thus, applying the Federal Circuit's holding in *LizardTech*, such a broadly construed claim would be invalid under 35 U.S.C. §112.¹⁷

In cases such as this, where a claim term is amenable to more than one reasonable construction, the Federal Circuit has held as a canon of claim construction that the claim term should be construed to preserve the validity of the claim. "When claims are amenable to more than one construction, they should when reasonably possible be interpreted so as to preserve their validity." *Modine Mfg. Co. v. United States Int'l Trade Comm'n*, 75 F.3d 1545, 1557 (Fed. Cir. 1996); *see also Amhil Enters. Ltd. v. Wawa, Inc.*, 81 F.3d 1554, 1562 (Fed. Cir. 1996).

Here, the parties dispute the proper construction of the term "core." Callaway's construction would render the claims unsupported by the written description, and therefore invalid under 35 U.S.C. § 112.¹⁸ Acushnet's construction, on the other hand, is reasonable, consistent with the specification, and supported by the written description. Thus, applying the Federal Circuit's guidance in *Modine*, the Court should construe the term "core" as proposed by Acushnet to exclude dual-core construction golf balls.

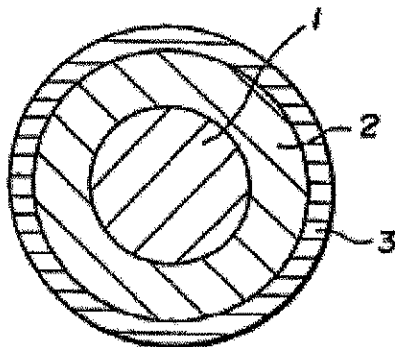
**d. Prior Art Cited in the Prosecution Histories
Suggests that the Core Refers Only to the
Innermost Component**

The prior art cited during prosecution of the patents-in-suit is also instructive as to how the term "core" should be construed. During the '130 patent, Spalding submitted an Information Disclosure Statement listing several prior art references. One of those references is particularly instructive as to how the term "core" should be used in the context of multi-layer golf balls.

¹⁷ 35 U.S.C. § 112 provides: "The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention."

¹⁸ If the term "core" is construed broadly enough to encompass dual-core constructions, Acushnet hereby moves that the asserted claims be ruled invalid pursuant to 35 U.S.C. § 112 for the reasons stated herein.

EPO 0 633 043 A1 (“the ‘043 patent”), a Bridgestone patent, describes a three-component golf ball, as depicted below:



Ex. G, at CW0308521-29. The ‘043 patent was filed on May 3, 1994, and published December 28, 1994. The ‘043 patent describes the innermost component (1) as the “center core,” the middle component (2) as the “intermediate layer,” and the outermost component (3) as the “cover”:

Referring to Fig. 1, there is schematically illustrated a typical three-piece solid golf ball embodying our new concepts. The ball includes a spherical center core 1 forming the center of the ball and a cover 3 forming the outermost layer of the ball. A relatively hard intermediate layer 2 is disposed between the core 1 and the cover 3.

‘043 patent, 3:3-6 (Ex. G, at CW0308523). The ‘043 patent is useful to claim construction because it refers to the “core” as the innermost component of the golf ball, and does not include in the definition of “core” the solid layer immediately beneath the cover. This is contrary to the definition Callaway would propose, which would read the term “core” to include both the “center core” and the “intermediate layer.” On the other hand, the ‘043 patent’s use of the term “core” is completely consistent with Acushnet’s proposed definition.

Thus, the prior art referenced in the ‘130 patent prosecution history favors Acushnet’s proposed construction of the term “core.” Such use of claim terms in prior art references is proper intrinsic evidence for the Court to consider when construing the claim term in the patents-in-suit. *See Tate Access Floors, Inc. v. Interface Architectural Res., Inc.*, 279 F.3d

1357, 1372 n.4 (Fed. Cir. 2002) (“[p]rior art cited in the prosecution history falls within the category of intrinsic evidence”).

3. Proper Construction of “inner cover layer comprising an ionomeric resin ... having a modulus of from about 15,000 to about 70,000 psi”

Many of the asserted claims recite a “modulus” limitation related to the inner cover layer of the claimed golf ball. For example, claim 4 of the ‘293 patent recites, in part:

said *inner cover layer* comprising an ionomeric resin including no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid and *having a modulus* of from about 15,000 to about 70,000 psi....

‘293 patent, col. 24:30-34 (emphasis added). Similar limitations are recited in claim 5 of the ‘130 patent, claims 8, 10, and 11 of the ‘156 patent, and claim 3 of the ‘873 patent.

The parties agree on the construction of the terms “modulus” and “low-acid” in this claim language. In particular, the parties agree that “modulus” refers to “the flex or flexural modulus of any low-acid ionomeric resin in the inner cover layer as measured in accordance with ASTM D-790.” Joint Claim Chart [D.I. 191] at 2. The parties also agree that “low-acid” means having “no more than 16% by weight of an alpha, beta-unsaturated carboxylic acid.” *Id.* at 2.

Accordingly, Acushnet requests that the Court construe the terms “modulus” and “low-acid” as used in claim 4 of the ‘293 patent, claim 5 of the ‘130 patent, claims 8, 10, and 11 of the ‘156 patent, and claim 3 of the ‘873 patent, as the parties have agreed.

The specifications of the patents-in-suit state that flexural modulus is “measured in accordance with ASTM method D-790.” *See, e.g.*, ‘293 patent at col. 11:11-15. ASTM method D-790 requires the creation of a test bar with a rectangular cross section. *See* ASTM D-790, Ex. J, at § 4.1. This test bar is then placed in one of two types of support mechanisms and is bent or deflected until the applied force is sufficient to rupture the sample or until maximum strain is reached. *See id.* at §§ 4.1.1-4.2.

Because these measurements must be performed on precisely-shaped bars (*see id.* at Table 3), this standard does not allow for the measurement of material specimens of other

shapes. Consequently, flexural modulus measurements of the ionomer resins must be performed on physical samples of resin shaped according to ASTM standard D-790. Because the ionomer resin takes the form of a hollow sphere once it has been formed onto a golf ball, a measurement of the ionomer resin made "on the ball" would not conform with ASTM standard D-790 and therefore would be contrary to the clear teachings of the specification.

V. CONCLUSION

For the reasons set forth above, Acushnet respectfully requests that the Court construe the disputed terms as proposed by Acushnet.

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**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

CERTIFICATE OF SERVICE

I, David E. Moore, hereby certify that on August 14, 2007, the attached document was electronically filed with the Clerk of the Court using CM/ECF which will send notification to the registered attorney(s) of record that the document has been filed and is available for viewing and downloading.

I hereby certify that on August 14, 2007, I have Electronically Mailed the document to the following person(s):

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